Amendments to the Claims:

1-4. (Cancelled)

5. (Previously Presented) A step-motion actuator comprising:

a plurality of teeth;

a movable drive pawl positioned so as to engage one or more of the teeth in a forward direction;

a piezoelectric element adapted to convert electrical energy into kinetic energy in the form of movement of the drive pawl, causing the drive pawl to drive against the one or more teeth to accomplish a step-motion in the forward direction;

a compression frame secured about the piezoelectric element and adapted to pre-compress the piezoelectric element so as to reduce tensile loads thereon; and

a mass secured to an arm, wherein the mass is spring-biased toward the compression frame and the piezoelectric element such that the piezoelectric element converts electrical energy into kinetic energy in the form of movement of the mass and the arm,

wherein the drive pawl is coupled with the arm such that movement of the mass and the arm causes movement of the drive pawl.

6. (Currently Amended) The step-motion actuator as set forth in claim [[1]] 5, further including a movable hold pawl positioned so as to engage one or more of the teeth in a reverse direction during movement of the drive pawl.

7. (Original) The step-motion actuator as set forth in claim 6, further including a hold pawl spring coupled with the hold pawl and adapted to move and maintain the hold pawl in position to engage the one or more teeth.

8. (Original) A step-motion actuator comprising:

a plurality of teeth;

a piezoelectric element adapted to convert electric energy to kinetic energy;

a compression frame secured about the piezoelectric element and adapted to pre-compress the piezoelectric element so as to reduce tensile loads thereon;

a mass secured to an arm, wherein the mass is spring-biased toward the compression frame and the piezoelectric element such that the piezoelectric element converts electrical energy into kinetic energy in the form of movement of the mass and the arm;

a movable drive pawl coupled with the arm and positioned so as to engage one or more of the teeth in a forward direction, wherein movement of the mass and the arm causes movement of the drive pawl, and wherein the drive pawl drives against the one or more teeth to accomplish a step-motion in the forward direction; and

a movable hold pawl positioned so as to engage one or more of the teeth in a reverse direction during movement of the drive pawl.

9. (Original) The step-motion actuator as set forth in claim 8, wherein the plurality of teeth are arranged circularly upon a wheel so as to accomplish a rotary step-motion.

10. (Original) The step-motion actuator as set forth in claim 8, wherein the plurality of teeth are arranged linearly upon a rod so as to accomplish linear step-motion.

11. (Original) The step-motion actuator as set forth in claim 8, further including a drive pawl spring coupled with the drive pawl and adapted to move and maintain the drive pawl in a position to engage the one or more teeth.

12. (Original) The step-motion actuator as set forth in claim 8, further including a hold pawl spring coupled with the hold pawl and adapted to move and maintain the hold pawl in position to engage the one or more teeth.

13. (Original) A step-motion actuator comprising:

a plurality of teeth;

a piezoelectric element adapted to convert electric energy to kinetic energy;

a compression frame secured about the piezoelectric element and adapted to pre-compress the piezoelectric element so as to reduce tensile loads thereon;

a first mass spring-biased toward a first end of the compression frame and the piezoelectric element;

a second mass spring-biased toward a second end of the compression frame and the piezoelectric element, wherein the piezoelectric element converts electrical energy into kinetic energy in the form of movement of the first mass and the second mass in substantially different directions;

a movable drive pawl coupled with the first mass and the second mass and positioned so as to engage one or more of the teeth in a forward direction, wherein movement of the first mass and the second mass causes movement of the drive pawl, and wherein the drive pawl drives against the one or more teeth to accomplish a step-motion in the forward direction; and

a movable hold pawl positioned so as to engage one or more of the teeth in a reverse direction during movement of the drive pawl.

14. (Original) The step-motion actuator as set forth in claim 13, wherein the plurality of teeth are arranged circularly upon a wheel so as to accomplish a rotary step-motion.

15. (Original) The step-motion actuator as set forth in claim 13, wherein the plurality of teeth are arranged linearly upon a rod so as to accomplish linear step-motion.

16. (Original) The step-motion actuator as set forth in claim 13, further including a drive pawl spring coupled with the drive pawl and adapted to move and maintain the drive pawl in a position to engage the one or more teeth.

17. (Original) The step-motion actuator as set forth in claim 13, further including a hold pawl spring coupled with the hold pawl and adapted to move and maintain the hold pawl in position to engage the one or more teeth.

18. (Original) A step-motion actuator comprising:

a plurality of teeth;

a piezoelectric element adapted to convert electric energy to kinetic energy;

a compression frame secured about the piezoelectric element and adapted to pre-compress the piezoelectric element so as to reduce tensile loads thereon, wherein the piezoelectric element and compression frame are movable;

an arm spring-biased directly against the compression frame such that the piezoelectric element converts electrical energy into kinetic energy in the form of movement of the piezoelectric element and compression frame against the arm and thereby moves the arm;

a movable drive pawl coupled with the arm and positioned so as to engage one or more of the teeth in a forward direction, wherein movement of the arm causes movement of the drive pawl, and wherein the drive pawl drives against the one or more teeth to accomplish a step-motion in the forward direction; and

a movable hold pawl positioned so as to engage one or more of the teeth in a reverse direction during movement of the drive pawl.

19. (Original) The step-motion actuator as set forth in claim 18, wherein the plurality of teeth are arranged circularly upon a wheel so as to accomplish a rotary step-motion.

20. (Original) The step-motion actuator as set forth in claim 18, wherein the plurality of teeth are arranged linearly upon a rod so as to accomplish linear step-motion.

21. (Original) The step-motion actuator as set forth in claim 18, further including a drive pawl spring coupled with the drive pawl and adapted to move and maintain the drive pawl in a position to engage the one or more teeth.

22. (Original) The step-motion actuator as set forth in claim 18, further including a hold pawl spring coupled with the hold pawl and adapted to move and maintain the hold pawl in position to engage the one or more teeth.

23. (Cancelled)